

I. PROPOSED AMENDMENTS TO THE CLAIMS

1. (currently amended) A helmet system for the protection of a wearer comprising:

a) a protective head covering, comprising

- i) an outer shell adapted to cover a substantial portion of said wearer's head;
- ii) a transparent face shield connected to said outer shell; and
- iii) a cushioning element inside of said outer shell;

and defining a protective head covering cavity;

b) at least one compressed breathable supply air canister fluidically coupled to said protective head covering;

c) at least one safety risk factor sensor;

d) an air release element fluidically coupled to said at least one compressed breathable supply air canister and responsive to said safety risk factor sensor so as to release breathable supply air into said protective head covering cavity upon the sensed presence of a safety risk factor; and

e) at least one pressurized air exfiltration element substantially fixed relative to said protective head covering.

2. (original) A helmet system for the protection of a wearer as in claim 1 wherein said at least one compressed breathable supply air canister comprises a cartridge.

3. (original) A helmet system for the protection of a wearer as in claim 1 wherein said at least one compressed breathable supply air canister comprises a tank located externally to said outer shell.

4. (original) A helmet system for the protection of a wearer as in claim 1 wherein said compressed breathable supply air canister is fluidically coupled to a location within said protective head covering by an air transport element.
5. (original) A helmet system for the protection of a wearer as in claim 1 wherein said safety risk sensor comprises at least one impact sensor.
6. (original) A helmet system for the protection of a wearer as in claim 1 wherein said air release element comprises at least one manually operable element.
7. (original) A helmet system for the protection of a wearer as in claim 1 wherein said air release element comprises at least one electrically activatable element.
8. (original) A helmet system for the protection of a wearer as in claim 1 wherein said air release element comprises a remote wireless signal response element.
9. (original) A helmet system for the protection of a wearer as in claim 1 wherein said air release element comprises at least one mechanically activatable element.
10. (original) A helmet system for the protection of a wearer as in claim 2 wherein said cartridge is directly attached to said outer shell.
11. (original) A helmet system for the protection of a wearer as in claim 1 wherein said at least one pressurized air exfiltration element comprises a flexible shroud attached along a base rim of said protective head covering.
12. (original) A helmet system for the protection of a wearer as in claim 1 wherein said at least one pressurized air exfiltration element comprises a pressurized air exfiltration element located at substantially the border of said face shield with said outer shell.

13. (original) A helmet system for the protection of a wearer as in claim 1 wherein said at least one pressurized air exfiltration element comprises at least one hole in said outer shell.

14. (original) A helmet system for the protection of a wearer as in claim 1 wherein said pressurized air exfiltration element comprises at least one pressure regulator.

15. (original) A helmet system for the protection of a wearer as in claim 2 wherein said helmet system further comprises a cartridge failure safety element.

16. (original) A helmet system for the protection of a wearer as in claim 4 wherein said air transport element comprises a detachment element.

17. (original) A helmet system for the protection of a wearer as in claim 1 further comprising a remote wireless sensor signal receipt element.

18. (currently amended) A method for protecting a user comprising the steps of:

- a) securing a protective head covering substantially around a user's head;
- b) providing at least one compressed breathable supply air canister fluidically coupled to said protective head covering;
- c) safety risk factor sensing;
- d) determining safety risk factor presence;
- e) establishing at least one flow of breathable air from said at least one compressed breathable supply air canister in response to said step of determining safety risk factor sensing presence;

f) providing said at least one flow of breathable air to inside said protective head covering in response to said step of establishing at least one flow of breathable air;

g) increasing an internal head covering air pressure to above an ambient condition value in response to said step of providing said at least one supply of breathable air; and

h) exfiltrating gas from within said protective head covering through an exfiltration element in response to said step of increasing an internal head covering air pressure.

19. (original) A method for protecting a user as in claim 18 wherein said step of safety risk factor sensing comprises the step of automatically sensing the presence of a safety risk factor.

20. (original) A method for protecting a user as in claim 18 wherein said step of safety risk factor sensing comprises the step human sensing the presence of a safety risk factor.

21. (original) A method for protecting a user as in claim 18 wherein said step of establishing at least one flow of breathable air comprises the step of manually initiating a release of said at least one flow of breathable air by a human wearer of said protective head covering in response to said step of determining safety risk factor presence.

22. (original) A method for protecting a user as in claim 18 wherein said step of establishing at least one flow of breathable air comprises the step of electrically initiating a release of said at least one flow of breathable air in response to said step of determining safety risk factor presence.

23. (original) A method for protecting a user as in claim 18 wherein said step of establishing at least one flow of breathable air comprises the step of establishing a flow of breathable air from a compressed breathable air cartridge.

24. (original) A method for protecting a user as in claim 18 wherein said step of establishing a flow of breathable air from said compressed breathable air canister comprises the step of initiating a release from said flow of breathable air externally of said protective head covering.

25. (original) A method for protecting a user as in claim 18 wherein said step of exfiltrating air from within said protective head covering comprises the step of exfiltrating air through a flexible shroud provided at a rim located at the base of said protective head covering.

26. (original) A method for protecting a user as in claim 18 wherein said step of exfiltrating air from within said protective head covering comprises the step of exfiltrating air through a border defined by a transparent helmet face shield and an outer helmet shell.

27. (original) A method for protecting a user as in claim 18 wherein said step of exfiltrating air from within said protective head covering comprises the step of exfiltrating air through a unitary pressure regulator.

28. (original) A method for protecting a user as in claim 18 further comprising the step of adjusting said exfiltration element.

29. (original) A method for protecting a user as in claim 18 further comprising the step of providing a cartridge failure safety element.

30. (original) A method for protecting a user as in claim 18 wherein said method for protecting a user is implementable in a racing vehicle environment.

31. (original) A method for protecting a user as in claim 18 further comprising the step of replacing an air transport element fluidically connected to said protective head covering.

32. (original) A method for protecting a user as in claim 18 further comprising the step of wirelessly communicating.

Respectfully Submitted,
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